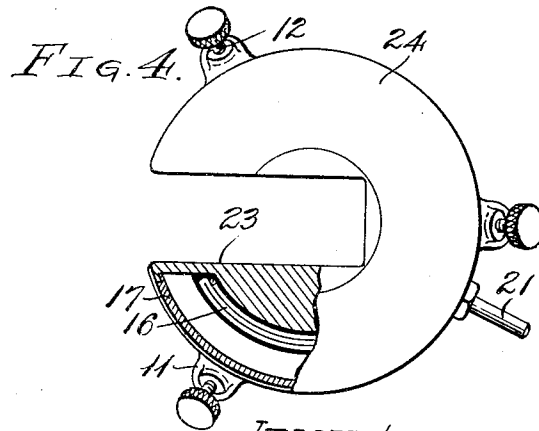
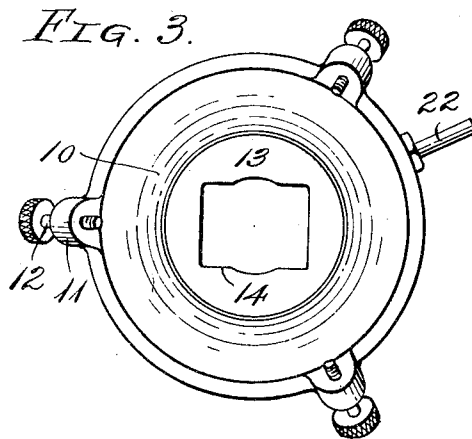
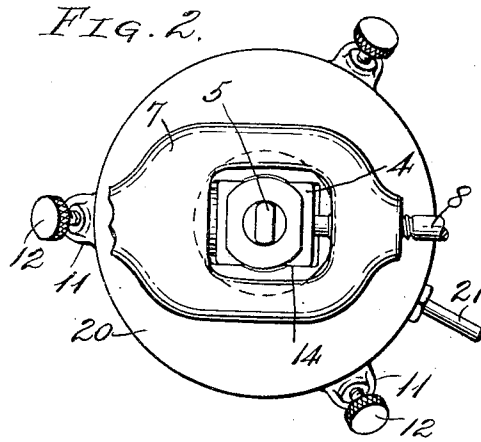
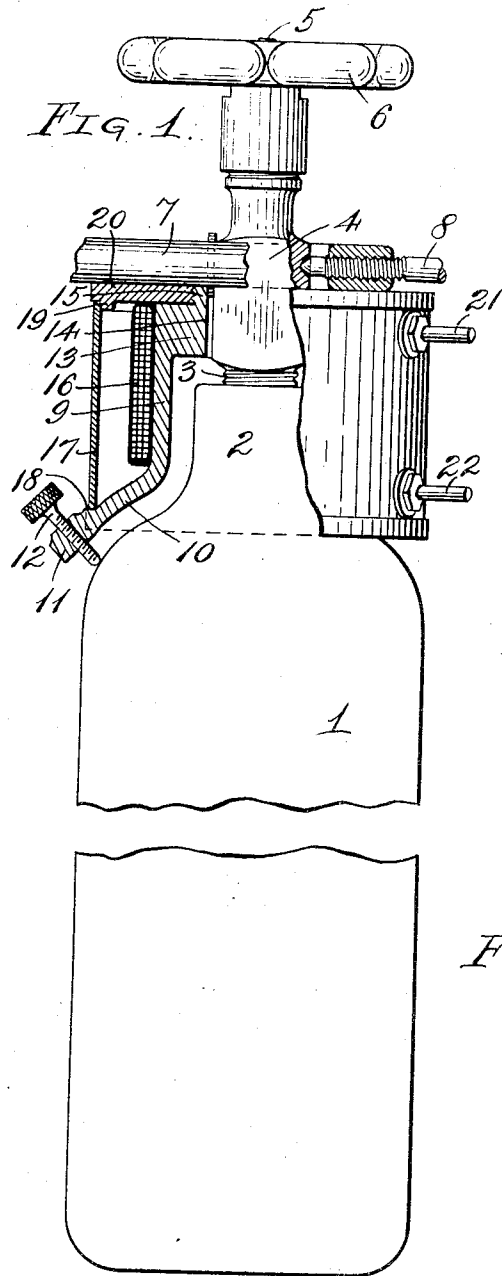


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ELECTRICAL APPARATUS.
APPLICATION FILED AUG. 17, 1914.

1,151,185.

Patented Aug. 24, 1915.



Witnesses:-

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UNITED STATES PATENT OFFICE.

FREDRICK C. JAMIESON, OF CLEVELAND, OHIO.

ELECTRICAL APPARATUS.

1,151,185.

Specification of Letters Patent.

Patented Aug. 24, 1915.

Application filed August 17, 1914. Serial No. 857,179.

To all whom it may concern:

Be it known that I, FREDRICK C. JAMIESON, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Electrical Apparatus, of which the following is a specification.

This invention relates to electrical apparatus generally and particularly to electrical heating units for preventing the freezing of expanding nitrous oxid gas.

More specifically the invention relates to a container having a valve member at one end thereof and adapted to be affected by heat transmitted to it from a heating element receiving the valve member and supplied with current from any suitable source.

The invention may be further briefly summarized as consisting in the construction and combination of parts hereinafter set forth in the following description, drawings and claims.

Referring to the drawings, Figure 1 is a view partly in elevation and partly in section; Fig. 2 is a top plan view; Fig. 3 is a bottom plan; and Fig. 4 is a top plan of a modified form.

In carrying out the invention any preferred form and construction of parts may be employed so long as they possess the necessary characteristics, but I have shown one arrangement in the drawings which meets the requirements, and in such embodiment 1 represents a container having a reduced neck 2 which receives the threaded shank 3 of a valve member 4 having a valve stem 5 extending out of the same and adapted to be engaged by a suitable hand wheel 6. The container 1 is supported from the valve member in a well known manner, and is held within a discharge yoke 7 by a suitable set screw 8. Between the point of engagement of the yoke and the reduced portion 2 of the container is an exposed part of the valve member, and this part is usually rectangular in form, as shown, and it is upon this part that the heating element is applied.

The heating element comprises a cylindrical or main body portion 9 having an outwardly extending skirt or flange 10 provided with depending feet 11 each adapted to receive a screw 12, the screws engaging the shoulder of the receptacle, as shown, for the purpose of adjusting the position of the heating element. The cylindrical body por-

tion 9 is provided with an inwardly extending flange 13 having a rectangular opening 14 therein adapted to fit nicely around and contact with the rectangular valve portion, and this flange 13 has an upwardly extending reduced portion 15 for a purpose to be described. Extending around the cylindrical body portion 9 is a heating element 16 of resistance wire which is arranged to heat the body portion of the flange 13. This element is arranged within an outer casing 17 and rests on a suitable ledge 18 of the flange 10 at the bottom and at the top engages on the outside of a bead 19 formed on the underside of a cover 20 which is threaded onto the upwardly extending reduced portion. When this cover is in place the outer casing 17 and the heating unit are held in place. Suitable posts 21 and 22 are electrically connected to the heating element and are secured in the casing in any suitable manner to supply current to this element.

In use, the device is let down over the valve member which passes into the opening 14, and when sufficient heat is generated the valve member is heated and the expanding gas is prevented from freezing.

In the modification shown in Fig. 4 the cylindrical body is cut away to form a slot 23 and the heating element is coiled around within the chamber on the outside of the main body. The cover 24 is held in place by being threaded onto a threaded extension of the main body portion 9.

Having described my invention, I claim:—

1. In nitrous oxid apparatus, a supporting yoke provided with a discharge, a container, a valve member projecting from said container and clamped in said yoke, and a heating unit surrounding said valve member and arranged between the yoke and the container and adapted to supply heat to the valve member and to the yoke to prevent the freezing of the expanding nitrous oxid.

2. A heating device for gas container valve members comprising a cylindrical body, an inwardly extending flange having an opening therein for receiving the valve member, an outwardly extending skirt, suitable foot portions extending from said skirt, adjusting screws arranged in said foot portions and adapted for engagement with the container, a heating element surrounding the body portion, and a housing for said element.

3. A heating device for gas container

valve members comprising a cylindrical body, an inwardly extending flange having an opening therein for receiving the valve member, an outwardly extending skirt, suitable foot portions extending from said skirt, adjusting screws arranged in said foot portions and adapted for engagement with the container, a heating element surrounding the body portion, an outer casing, and a cover secured to the main body portion.

4. A heating device for gas container

valve members comprising a main body portion having a lateral slot therein for the reception of the valve member, a heating element, and a suitable housing for said element.

In testimony whereof I affix my signature in presence of two witnesses as follows:

FREDRICK C. JAMIESON.

Witnesses:

C. H. TRESCH,

G. O. FARQUHARSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."